



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200

## Purchasing Receipts

| PO No    | Supplier  | Line Item No | Rel No    | Terms        | Purchased Item   | Description | For Part No | Project | Equipment ID | Order Qty | Due Date | Received Quantity | Accounting Job No | Container No | Status | Receive Date | Price/Unit                | Aging Days | Past Due | Total    | Supplier Name             |
|----------|-----------|--------------|-----------|--------------|--|-------------|-------------|---------|--------------|-----------|----------|-------------------|-------------------|--------------|--------|--------------|---------------------------|------------|----------|----------|---------------------------|
| PO039799 | MCM001-VU | 1            | 1         | 2% 10 Net 30 | 90985A113  | Knob Grip   |             |         |              | 6         | 5/8/2018 | 6                 |                   | S069399      | Stock  | 5/8/2018     | \$ 20.45 / Ea             | 0          |          | \$122.70 | McMaster-Carr Supply Co., |
|          |           | 2            | 91247A122 |              | Bolt receive ea  |             |             | 50      |              | S069400   | Stock    | 5/8/2018          | \$ 0.40 / Ea      | 0            |        | \$19.88      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 3            | 91247A740 |              | Hex Head Screw   |             |             | 10      |              | S069440   | Stock    | 5/8/2018          | \$ 2.05 / Ea      | 0            |        | \$20.48      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 4            | 98407A132 |              | Retaining Ring receive pcs   |             |             | 100     |              | S069401   | Stock    | 5/8/2018          | \$ 0.06 / pcs     | 0            |        | \$6.33       | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 5            | 92196A341 |              | socket head screw 5/16"-24   |             |             | 25      |              | S069441   | Stock    | 5/8/2018          | \$ 0.37 / Ea      | 0            |        | \$9.28       | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 6            | 9657K122  |              | Ø0.437 OD x Ø0.054 WIRE x 2, 15.54 LBS/IN. SPRING receive ea       |             |             | 12      |              | S069402   | Stock    | 5/8/2018          | \$ 0.60 / Ea      | 0            |        | \$7.22       | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 7            | 2416K97   |              | 301 SS Strip, Fatigue-Resistant                                    |             |             | 20      |              | S069442   | Stock    | 5/8/2018          | \$ 3.83 / ft      | 0            |        | \$76.52      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 8            | 1217T42   |              | 301 SS Sheet, Fatigue-Resistant                                    |             |             | 3       |              | S069455   | Stock    | 5/8/2018          | \$ 18.09 / sf     | 0            |        | \$54.28      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 9            | 1217T45   |              |  |             |             | 3       |              | S069456   | Stock    | 5/8/2018          | \$ 31.74 / sf     | 0            |        | \$95.21      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 10           | 3777T12   |              | Spring Catch receive ea  |             |             | 4       |              | S069403   | Stock    | 5/8/2018          | \$ 11.52 / Ea     | 0            |        | \$46.08      | McMaster-Carr Supply Co., |            |          |          |                           |
|          |           | 11           | 89895K451 |              | Smooth-Bore Seamless 304 SS Tubing, 3/8" OD, 0.049" Wall Thickness |             |             | 4       |              | S069404   | Stock    | 5/8/2018          | \$ 8.57 / Ea      | 0            |        | \$34.28      | McMaster-Carr Supply Co., |            |          |          |                           |

| PO No | Supplier | Line Item No | Rel No | Terms | Purchased Item          | Description  | For Part No | Project | Equipment ID | Order Qty | Due Date | Received Quantity | Accounting Job No | Container No | Status   | Receive Date | Price/Unit    | Aging Days | Past Due | Total    | Supplier Name            |
|-------|----------|--------------|--------|-------|-------------------------|--|-------------|---------|--------------|-----------|----------|-------------------|-------------------|--------------|----------|--------------|---------------|------------|----------|----------|--------------------------|
|       |          | 12           |        |       | 90146A059               | Pin Bent-Pull Clevis Pin with Hairpin Cotter Pin 5/16" Dia, 2-1/2" Usable Length   |             |         |              | 7         |          | 7                 |                   | S069405      | Stock    | 5/8/2018     | \$ 2.59 / Ea  | 0          |          | \$18.13  | McMaster-Carr Supply Co, |
|       |          | 13           |        |       | 93695K58                | Window Seal  |             |         |              | 50        |          | 50                |                   | S069406      | Inactive | 5/8/2018     | \$ 0.32 / ft  | 0          |          | \$16.15  | McMaster-Carr Supply Co, |
|       |          | 14           |        |       | MT-BRONZE-C63000-R1.000 | Bronze C63000 Round Bar 1.000" : MAT'L AS PER BRONZE C63000 AS PER ANS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463 |             |         |              | 6         |          | 2                 |                   | S069340      | Stock    | 5/8/2018     | \$ 56.84 / ft | 0          |          | \$113.68 | McMaster-Carr Supply Co, |
|       |          |              |        |       |                         |  |             |         |              |           |          | 4                 |                   | S069449      | Inactive | 5/8/2018     | \$ 56.84 / ft | 0          |          | \$227.36 | McMaster-Carr Supply Co, |
|       |          | 15           |        |       | MT-BRONZE-C63000-R1.250 | Bronze C63000 Round Bar 1.25" : MAT'L AS PER BRONZE C63000 AS PER ANS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463  |             |         |              |           |          | 1                 |                   | S069341      | Stock    | 5/8/2018     | \$ 85.67 / ft | 0          |          | \$85.67  | McMaster-Carr Supply Co, |
|       |          |              |        |       |                         |  |             |         |              |           |          | 5                 |                   | S069448      | Stock    | 5/8/2018     | \$ 85.67 / ft | 0          |          | \$428.33 | McMaster-Carr Supply Co, |
|       |          | 16           |        |       | MT-NYLON 6-R1.000-B     | Nylon 6 Black Round Bar 1.000" Dia.  |             |         |              |           |          | 6                 |                   | S069407      | Stock    | 5/8/2018     | \$ 15.43 / ft | 0          |          | \$92.58  | McMaster-Carr Supply Co, |

| PO No  | Supplier | Line Item No | Rel No | Terms | Purchased Item | Description  | For Part No | Project | Equipment ID | Order Qty | Due Date | Received Quantity | Accounting Job No | Container No | Status | Receive Date | Price/Unit    | Aging Days | Past Due | Total    | Supplier Name            |  |
|--------|----------|--------------|--------|-------|----------------|--|-------------|---------|--------------|-----------|----------|-------------------|-------------------|--------------|--------|--------------|---------------|------------|----------|----------|--------------------------|--|
|        |          | 17           |        |       | MBRONZR1.000   | Bronze Round Bar 1.000"<br>MATERIAL: OIL IMPREGNATED SINTERED BRONZE<br>ROUND BAR AS PER SAE 841 TYPE 1, CLASS A OR AMS 4805 OR ASTM B438<br>GRADE 1, TYPE 2 OR MIL-B-5687D<br>TYPE 1, GRADE 1<br>receive ft |             |         |              | 2         |          | 2                 |                   | S069443      | Stock  | 5/8/2018     | \$ 60.19 / ft | 0          |          | \$130.60 | McMaster-Carr Supply Co, |  |
| Total: |          |              |        |       |                |  |             |         |              | 314       |          |                   | 314               |              |        |              |               |            |          |          | \$1,604.76               |  |

Plex 5/8/2018 1:27 PM darl.Tollis.Andrew



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

## PURCHASE ORDER PO039799

**Supplier:** MCM001-VU  
McMaster-Carr Supply Co,  
P.O. Box 7690  
Chicago, IL 60680-7690 USA  
Phone: 330 995 5500  
Fax: 330 995 9600

**PO No:** PO039799

**PO Date:** 5/4/18

**Due Date:** 5/8/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**E-MAILED**  
MAY 04 2018

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pynt Terms:** 2% 10 Net 30

**Freight Terms:**

**Special Comments:**

### Items

| Line Item                            | Part      | Supplier Part No | Description  | Status | Due Date | Order Quantity | Received Quantity | Balance | Unit Price (USD) | Extended Price |
|--------------------------------------|-----------|------------------|--|--------|----------|----------------|-------------------|---------|------------------|----------------|
| 1                                    | 90985A113 | 1/pk             | Knob Grip  | Firmed | 5/8/18   | 6 Ea           | 0 Ea              | 6 Ea    | \$20.45/Ea       | \$122.70       |
| 2                                    | 91247A122 | 25/pk            | Bolt receive ea  | Firmed | 5/8/18   | 50 Ea          | 0 Ea              | 50 Ea   | \$0.3976/Ea      | \$19.88        |
| 3                                    | 91247A740 | 5/pk             | Hex Head Screw   | Firmed | 5/8/18   | 10 Ea          | 0 Ea              | 10 Ea   | \$2.048/Ea       | \$20.48        |
| 4                                    | 98407A132 | 100/pk           | Retaining Ring receive pcs   | Firmed | 5/8/18   | 100 pcs        | 0 pcs             | 100 pcs | \$0.0633/pcs     | \$6.33         |
| 5                                    | 92196A341 | 25/pk            | socket head screw 5/16"-24   | Firmed | 5/8/18   | 25 Ea          | 0 Ea              | 25 Ea   | \$0.3712/Ea      | \$9.28         |
| 6                                    | 9657K122  | 12/pk            | Ø0.437 OD x Ø0.054 WIRE x 2, 15.54 LBS/IN. SPRING receive ea       | Firmed | 5/8/18   | 12 Ea          | 0 Ea              | 12 Ea   | \$0.601666/Ea    | \$7.22         |
| 7                                    | 2416K97   |                  | 301 SS Strip, Fatigue-Resistant                                    | Firmed | 5/8/18   | 20 ft          | 0 ft              | 20 ft   | \$3.826/ft       | \$76.52        |
| <b>Line Item Note</b> 2 pcs of 10 ft |           |                  |  |        |          |                |                   |         |                  |                |
| 8                                    | 1217T42   | 3sf / pcs        | 301 SS Sheet, Fatigue-Resistant                                    | Firmed | 5/8/18   | 3 sf           | 0 sf              | 3 sf    | \$18.09333/sf    | \$54.28        |
| 9                                    | 1217T45   | 3sf / pcs        | 301 SS Sheet, Fatigue-Resistant                                    | Firmed | 5/8/18   | 3 sf           | 0 sf              | 3 sf    | \$31.73666/sf    | \$95.21        |
| 10                                   | 3777T12   | 1/pk             | Spring Catch receive ea  | Firmed | 5/8/18   | 4 Ea           | 0 Ea              | 4 Ea    | \$11.52/Ea       | \$46.08        |
| 11                                   | 89895K451 | 8" per pcs       | Smooth-Bore Seamless 304 SS Tubing, 3/8" OD, 0.049" Wall Thickness | Firmed | 5/8/18   | 4 Ea           | 0 Ea              | 4 Ea    | \$8.57/Ea        | \$34.28        |

| Items                                  |                         |                           |  |        |          |                         |                   |         |                  |                |
|--|-------------------------|---------------------------|--|--------|----------|-------------------------|-------------------|---------|------------------|----------------|
| Line Item                              | Part                    | Supplier Part No          | Description  | Status | Due Date | Order Quantity          | Received Quantity | Balance | Unit Price (USD) | Extended Price |
| 12                                     | 90146A059               |                           | Pin<br>Bent-Pull Clevis Pin<br>with Hairpin Cotter<br>Pin<br>5/16" Dia, 2-1/2"<br>Usable Length  | Firmed | 5/8/18   | 7 Ea                    | 0 Ea              | 7 Ea    | \$2.59/Ea        | \$18.13        |
| 13                                     | 93695K58                |                           | Window Seal  | Firmed | 5/8/18   | 50 ft                   | 0 ft              | 50 ft   | \$0.323/ft       | \$16.15        |
| Line Item Note wo176557                |                         |                           |  |        |          |                         |                   |         |                  |                |
| 14                                     | MT-BRONZE-C63000-R1.000 | 8203K61<br>3 FT long      | Bronze C63000<br>Round Bar 1.000"<br>: MAT'L AS PER<br>BRONZE C63000<br>AS PER ANS 4640<br>OR ASME SB150<br>OR ASTM B150 OR<br>SAE J461 OR SAE<br>J463   | Firmed | 5/8/18   | 6 ft                    | 0 ft              | 6 ft    | \$56.84/ft       | \$341.04       |
| Line Item Note 2 pcs of 3 ft           |                         |                           |  |        |          |                         |                   |         |                  |                |
| 15                                     | MT-BRONZE-C63000-R1.250 | 8203K81<br>3 FT long      | Bronze C63000<br>Round Bar 1.25"<br>: MAT'L AS PER<br>BRONZE C63000<br>AS PER ANS 4640<br>OR ASME SB150<br>OR ASTM B150 OR<br>SAE J461 OR SAE<br>J463  | Firmed | 5/8/18   | 6 ft                    | 0 ft              | 6 ft    | \$85.6666/ft     | \$514.00       |
| 16                                     | MT-NYLON 6-R1.000-B     | 2889K21<br>2 ft<br>length | Nylon 6 Black<br>Round Bar 1.000"<br>Dia.  | Firmed | 5/8/18   | 6 ft                    | 0 ft              | 6 ft    | \$15.43/ft       | \$92.58        |
| 17                                     | MBRONZR1.000            | 8932K45<br>6.5" long      | Bronze Round Bar<br>1.000"<br>: MATERIAL: OIL<br>IMPREGNATED<br>SINTERED<br>BRONZE ROUND<br>BAR AS PER SAE<br>841 TYPE 1,<br>CLASS A OR AMS<br>4805 OR ASTM<br>B438 GRADE 1,<br>TYPE 2 OR MIL-B-<br>5687D TYPE 1,<br>GRADE 1<br>receive ft | Firmed | 5/8/18   | 2.167 ft                | 0 ft              | 2 ft    | \$60.185185/ft   | \$130.42       |
| Line Item Note 4 pcs of 6.5"           |                         |                           |  |        |          |                         |                   |         |                  |                |
|  |                         |                           |  |        |          |                         |                   |         | Grand Total:     | \$1,604.58     |
| Order Notes                            |                         |                           |  |        |          | rec'd AT 18/05/18<br>CL |                   |         |                  |                |
| Plex 5/4/18 1:50 PM dart.lavoie.chanta |                         |                           |  |        |          |                         |                   |         |                  |                |

**Order Notes**

## Procurement Quality Clauses

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT

A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

*Plex 5/4/18 1:50 PM dart.lavoie.chantal*



200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-01**

Page 1 of 2

05/04/2018

| Line | Product  | Ordered    | Shipped |
|------|--|------------|---------|
| 3    | <b>91247A740</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 1/2"-13 Thread Size, 8" Long, Partially Threaded, Packs of 5 | 2<br>Packs | 2       |
| 5    | <b>92196A341</b> 18-8 Stainless Steel Socket Head Screw, 5/16"-24 Thread Size, 1" Long, Packs of 25                                      | 1<br>Pack  | 1       |
| 7    | <b>2416K97</b> Fatigue-Resistant 301 Stainless Steel, Strip, 0.031" Thick, 3/4" Wide, 10 Feet Long                                       | 2<br>Each  | 2       |
| 17   | <b>8932K45</b> Oil-Filled 841 Bearing Bronze Rod, 1" Diameter, 6-1/2" Long   | 4<br>Each  | 4       |

Shipped separately from our Cleveland warehouse on 05/04

|    |   |            |   |
|----|---|------------|---|
| 1  | <b>90985A113</b> Knob-Grip Push-Button Quick-Release Pin, 1/4" Diameter, 1-1/2" Usable Length                                 | 6<br>Each  | 6 |
| 2  | <b>91247A122</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 5/16"-24 Thread Size, 3" Long, Partially Threaded | 2<br>Packs | 2 |
| 4  | <b>98407A132</b> Side-Mount External Retaining Ring, Zinc Yellow-Chromate-Plated Steel, for 5/16" OD                          | 1<br>Pack  | 1 |
| 6  | <b>9657K122</b> Compression Spring, Zinc-Plated, Tempered, Closed Ends, 2" Long, 0.438" OD                                    | 1<br>Pack  | 1 |
| 8  | <b>1217T42</b> Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.024" Thick                          | 1<br>Each  | 1 |
| 9  | <b>1217T45</b> Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.059" Thick                          | 1<br>Each  | 1 |
| 10 | <b>3777T12</b> 316 Stainless Steel Carabiner, Not for Lifting, 200 lbs. Capacity, 5/16" Thick, 15/16" Narrow-End Inside Width | 4<br>Each  | 4 |
| 11 | <b>89895K451</b> Smooth-Bore Seamless 304 Stainless Steel Tubing, 3/8" OD, 0.049" Wall Thickness, 8" Long                     | 4<br>Each  | 4 |
| 12 | <b>90146A059</b> Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length        | 7<br>Each  | 7 |
| 13 | <b>93695K58</b> Flame-Retardant Oil-Resistant Blended Buna-N Foam, Adhesive Back Strip, 1" x 50 Feet, 1/4" Thick              | 1<br>Each  | 1 |

# Packing List

200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-01**

Page 2 of 2

05/04/2018

| Line | Description   | Ordered   | Shipped |
|------|---|-----------|---------|
| 14   | <b>8203K61</b> High-Strength 630 Bronze, 1" Diameter, 3 Feet Long     | 2<br>Each | 2       |
| 15   | <b>8203K81</b> High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long | 2<br>Each | 1       |
| 16   | <b>2889K21</b> MDS-Filled Cast Nylon Rod, 1" Diameter, 2 Feet Long    | 3<br>Each | 3       |



200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-04**

Page 1 of 1

05/04/2018

| Line | Product  | Ordered    | Shipped |
|------|--|------------|---------|
| 1    | <b>90985A113</b> Knob-Grip Push-Button Quick-Release Pin, 1/4" Diameter, 1-1/2" Usable Length  | 6<br>Each  | 6       |
| 2    | <b>91247A122</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 5/16"-24 Thread Size, 3" Long, Partially Threaded, Packs of 25 | 2<br>Packs | 2       |
| 4    | <b>98407A132</b> Side-Mount External Retaining Ring, Zinc Yellow-Chromate-Plated Steel, for 5/16" OD, Packs of 100                         | 1<br>Pack  | 1       |
| 6    | <b>9657K122</b> Compression Spring, Zinc-Plated, Tempered, Closed Ends, 2" Long, 0.438" OD, Packs of 12                                    | 1<br>Pack  | 1       |
| 10   | <b>3777T12</b> 316 Stainless Steel Carabiner, Not for Lifting, 200 lbs. Capacity, 5/16" Thick, 15/16" Narrow-End Inside Width              | 4<br>Each  | 4       |
| 11   | <b>89895K451</b> Smooth-Bore Seamless 304 Stainless Steel Tubing, 3/8" OD, 0.049" Wall Thickness, 8" Long                                  | 4<br>Each  | 4       |
| 12   | <b>90146A059</b> Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length                     | 7<br>Each  | 7       |
| 13   | <b>93695K58</b> Flame-Retardant Oil-Resistant Blended Buna-N Foam, Adhesive Back Strip, 1" x 50 Feet, 1/4" Thick                           | 1<br>Each  | 1       |
| 16   | <b>2889K21</b> MDS-Filled Cast Nylon Rod, 1" Diameter, 2 Feet Long   | 3<br>Each  | 3       |

Shipped separately from our Chicago warehouse on 05/04

|    |  |            |   |
|----|--|------------|---|
| 3  | <b>91247A740</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 1/2"-13 Thread Size, 8" Long, Partially Threaded | 2<br>Packs | 2 |
| 5  | <b>92196A341</b> 18-8 Stainless Steel Socket Head Screw, 5/16"-24 Thread Size, 1" Long                                       | 1<br>Pack  | 1 |
| 7  | <b>2416K97</b> Fatigue-Resistant 301 Stainless Steel, Strip, 0.031" Thick, 3/4" Wide, 10 Feet Long                           | 2<br>Each  | 2 |
| 15 | <b>8203K81</b> High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long  | 2<br>Each  | 1 |
| 17 | <b>8932K45</b> Oil-Filled 841 Bearing Bronze Rod, 1" Diameter, 6-1/2" Long   | 4<br>Each  | 4 |



# McMASTER-CARR®

## Packing List

200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-05**

Page 1 of 1

05/04/2018

| Line | Product   | Ordered   | Shipped |
|------|---|-----------|---------|
| 14   | <b>8203K61</b> High-Strength 630 Bronze, 1" Diameter, 3 Feet Long     | 2<br>Each | 2       |
| 15   | <b>8203K81</b> High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long | 2<br>Each | 1       |

Shipped separately from our Chicago warehouse on 05/04

|    |  |            |   |
|----|--|------------|---|
| 3  | <b>91247A740</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 1/2"-13 Thread Size, 8" Long, Partially Threaded | 2<br>Packs | 2 |
| 5  | <b>92196A341</b> 18-8 Stainless Steel Socket Head Screw, 5/16"-24 Thread Size, 1" Long                                       | 1<br>Pack  | 1 |
| 7  | <b>2416K97</b> Fatigue-Resistant 301 Stainless Steel, Strip, 0.031" Thick, 3/4" Wide, 10 Feet Long                           | 2<br>Each  | 2 |
| 15 | <b>8203K81</b> High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long  | 2<br>Each  | 1 |
| 17 | <b>8932K45</b> Oil-Filled 841 Bearing Bronze Rod, 1" Diameter, 6-1/2" Long   | 4<br>Each  | 4 |



200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-02**

Page 1 of 2

05/04/2018

| Line | Product  | Ordered   | Shipped |
|------|--|-----------|---------|
| 15   | 8203K81 High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long | 2<br>Each | 1       |

Shipped separately from our Cleveland warehouse on 05/04

|    |  |            |   |
|----|--|------------|---|
| 1  | 90985A113 Knob-Grip Push-Button Quick-Release Pin, 1/4" Diameter, 1-1/2" Usable Length                                 | 6<br>Each  | 6 |
| 2  | 91247A122 Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 5/16"-24 Thread Size, 3" Long, Partially Threaded | 2<br>Packs | 2 |
| 4  | 98407A132 Side-Mount External Retaining Ring, Zinc Yellow-Chromate-Plated Steel, for 5/16" OD                          | 1<br>Pack  | 1 |
| 6  | 9657K122 Compression Spring, Zinc-Plated, Tempered, Closed Ends, 2" Long, 0.438" OD                                    | 1<br>Pack  | 1 |
| 8  | 1217T42 Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.024" Thick                          | 1<br>Each  | 1 |
| 9  | 1217T45 Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.059" Thick                          | 1<br>Each  | 1 |
| 10 | 3777T12 316 Stainless Steel Carabiner, Not for Lifting, 200 lbs. Capacity, 5/16" Thick, 15/16" Narrow-End Inside Width | 4<br>Each  | 4 |
| 11 | 89895K451 Smooth-Bore Seamless 304 Stainless Steel Tubing, 3/8" OD, 0.049" Wall Thickness, 8" Long                     | 4<br>Each  | 4 |
| 12 | 90146A059 Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length        | 7<br>Each  | 7 |
| 13 | 93695K58 Flame-Retardant Oil-Resistant Blended Buna-N Foam, Adhesive Back Strip, 1" x 50 Feet, 1/4" Thick              | 1<br>Each  | 1 |
| 14 | 8203K61 High-Strength 630 Bronze, 1" Diameter, 3 Feet Long   | 2<br>Each  | 2 |
| 15 | 8203K81 High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long   | 2<br>Each  | 1 |



200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**  
Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-03**

Page 1 of 1  
05/04/2018

| Line | Product  | Ordered   | Shipped |
|------|--|-----------|---------|
| 8    | <b>1217T42</b> Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.024" Thick | 1<br>Each | 1       |
| 9    | <b>1217T45</b> Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.059" Thick | 1<br>Each | 1       |

Shipped separately from our Chicago warehouse on 05/04

|    |  |            |   |
|----|--|------------|---|
| 3  | <b>91247A740</b> Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 1/2"-13 Thread Size, 8" Long, Partially Threaded | 2<br>Packs | 2 |
| 5  | <b>92196A341</b> 18-8 Stainless Steel Socket Head Screw, 5/16"-24 Thread Size, 1" Long                                       | 1<br>Pack  | 1 |
| 7  | <b>2416K97</b> Fatigue-Resistant 301 Stainless Steel, Strip, 0.031" Thick, 3/4" Wide, 10 Feet Long                           | 2<br>Each  | 2 |
| 15 | <b>8203K81</b> High-Strength 630 Bronze, 1-1/4" Diameter, 3 Feet Long  | 2<br>Each  | 1 |
| 17 | <b>8932K45</b> Oil-Filled 841 Bearing Bronze Rod, 1" Diameter, 6-1/2" Long   | 4<br>Each  | 4 |

# Packing List

200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO039799**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**3155178-02**

Page 2 of 2

05/04/2018

| Line | Description  | Ordered          | Shipped  |
|------|--|------------------|----------|
| 16   | <b>2889K21</b> MDS-Filled Cast Nylon Rod, 1" Diameter, 2 Feet Long | <b>3</b><br>Each | <b>3</b> |

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-Nylon6-R1.000B PO / BATCH NO.: 039799/5069407  
 DATE: MAY 0 8 2018

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 6  
 QUANTITY INSPECTED: 6  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.000  
 THICKNESS RECEIVED: 1.000  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

| DESCRIPTION  | NCR<br>(Check<br>Y/N) |     | COMMENTS               |
|--|-----------------------|-----|------------------------|
| SURFACE DAMAGE                                     | Y                     | (N) |                        |
| CORRECT FINISH                                     | (Y)                   | N   |                        |
| CORROSION  | Y                     | (N) |                        |
| CORRECT GRAIN DIRECTION                            | (Y)                   | N   |                        |
| CORRECT MATERIAL PER M-DRAWING                     | (Y)                   | N   | Astm D5989             |
| CORRECT THICKNESS                                  | (Y)                   | N   |                        |
| PHOTO REQUIRED                                     | Y                     | (N) |                        |
| CORRECT REF # TO LINK CERT                         | (Y)                   | N   | PO#039799 Part#2889K21 |
| CORRECT MATERIAL IDENTIFICATION                    | (Y)                   | N   |                        |
| CORRECT M# ON THE MATERIAL                         | (Y)                   | N   |                        |
| DOES THIS MATERIAL REQUIRE<br>ENGINEERING SIGN OFF | Y                     | (N) |                        |
| DOES THIS REQUIRE AN<br>EXTRUSION REPORT           | Y                     | (N) |                        |

| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.<br>RECORD RESULTS BELOW |     |     |       |       |         |
|--|-----|-----|-------|-------|---------|
|  | HRC | HRB | DUR A | DUR D | WEBSTER |
| TYPE OF MATERIAL   |     |     |       |       |         |
| SIZE OF TEST SAMPLE  |     |     |       |       |         |
| HARDNESS / DUROMETER READING   |     |     |       |       |         |

testers located in the Quality Office

| QC 18 INSPECTION                      |  | ENGINEERING SIGNOFF (if required) |  |
|---------------------------------------|--|-----------------------------------|--|
| INSPECTED BY: <u>DAS</u>              |  | SIGNED OFF BY: _____              |  |
| DATE: <u>9-89</u> <u>MAY 0 8 2018</u> |  | DATE: _____                       |  |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

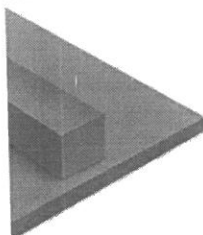
- Impact Strength: 0.7 ft.-lbs./in. (Poor)
- For Use Outdoors: Yes
- Specifications Met: ASTM D5989

The addition of MDS gives these cast nylon 6 rods a self-lubricating surface that's more slippery and wear resistant than standard cast nylon. Use them to fabricate pulleys, screws, bushings, bearings. They're lightweight, stiff, and easier to machine than other types of nylon. They are also an excellent insulator.

| Dia.   | Tolerance Rating | Lengths, ft. | Per Ft.         |
|--------|------------------|--------------|-----------------|
| 1"     | Oversized        | 1, 2         | 2889K21 \$15.43 |
| 1 1/2" | Oversized        | 1, 2         | 2889K31 17.90   |
| 2"     | Oversized        | 1, 2         | 2889K116 27.50  |
| 2 1/2" | Oversized        | 1, 2         | 2889K126 40.80  |
| 3"     | Oversized        | 1, 2         | 2889K136 54.93  |
| 3 1/2" | Oversized        | 1, 2         | 2889K146 71.23  |
| 4"     | Oversized        | 1, 2         | 2889K156 82.20  |
| 4 1/2" | Oversized        | 1            | 2889K161 95.09  |
| 5"     | Oversized        | 1            | 2889K171 116.23 |

3716

### MDS-Filled Cast Nylon Sheets and Bars



649-649

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MBronz R1.000

PO / BATCH NO: 039799/5069443

DATE: MAY 0 8 2018

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: 1.000

QUANTITY RECEIVED: 2'

THICKNESS RECEIVED: 1.000

QUANTITY INSPECTED: 2'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

| DESCRIPTION                                     | NCR<br>(Check Y/N) |     | COMMENTS                        |
|---|--------------------|-----|---------------------------------|
| SURFACE DAMAGE                                  | Y                  | (N) |                                 |
| CORRECT FINISH                                  | (Y)                | N   |                                 |
| CORROSION                                       | Y                  | (N) |                                 |
| CORRECT GRAIN DIRECTION                         | (Y)                | N   |                                 |
| CORRECT MATERIAL PER M-DRAWING                  | (Y)                | N   | <u>ASTM B438</u>                |
| CORRECT THICKNESS                               | (Y)                | N   |                                 |
| PHOTO REQUIRED                                  | Y                  | (N) |                                 |
| CORRECT REF # TO LINK CERT                      | (Y)                | N   | <u>Br Y # 893245 - P# 03299</u> |
| CORRECT MATERIAL IDENTIFICATION                 | (Y)                | N   |                                 |
| CORRECT M# ON THE MATERIAL                      | (Y)                | N   |                                 |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | Y                  | (N) |                                 |
| DOES THIS REQUIRE AN EXTRUSION REPORT           | Y                  | (N) |                                 |

| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.<br>RECORD RESULTS BELOW |     |     |       |       |         |
|--|-----|-----|-------|-------|---------|
|  | HRC | HRB | DUR A | DUR D | WEBSTER |
| TYPE OF MATERIAL   |     |     |       |       |         |
| SIZE OF TEST SAMPLE  |     |     |       |       |         |
| HARDNESS / DUROMETER READING   |     |     |       |       |         |

testers located in the Quality Office

|                                |                      |                                   |  |
|--------------------------------|----------------------|-----------------------------------|--|
| QC 18 INSPECTION               |                      | ENGINEERING SIGNOFF (if required) |  |
| INSPECTED BY: <u>DAS 11</u>    | SIGNED OFF BY: _____ |                                   |  |
| DATE: <u>9-89 MAY 0 8 2018</u> | DATE: _____          |                                   |  |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**SPECIFICATION CONTROL DRAWING**

PURCHASE MATERIAL: OIL IMPREGNATED SINTERED BRONZE ROUND BAR

SPECIFICATION: SAE 841 TYPE 1, CLASS A OR  
AMS 4805 OR  
ASTM B438 GRADE 1, TYPE 2 OR  
ML-B-5687D TYPE 1, GRADE 1

PART NUMBER: MBRONZRD.DDD  
DIA  
WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 5/8 ROUND BAR = MBRONZR0.625

RELEASED  
2011-07-19

|            |           |   |    |      |
|------------|-----------|---|----|------|
| A          | NEW ISSUE | DESCRIPTION   | BY | DATE |
| REV.       |           |   |    |      |
| DESIGN     |           | DART AEROSPACE LTD  |    |      |
| DRAWN      |           | HAWKESBURY, ONTARIO, CANADA   |    |      |
| CHECKED    |           | DRAWING NO.   |    |      |
| MFG. APPR. |           | MBRONZR   |    |      |
| APPROVED   |           | TITLE   |    |      |
| DE APPR.   |           | BRONZE ROUND BAR  |    |      |
| DATE       | 10.10.25  | SCALE   |    |      |
|            |           | NTS   |    |      |
|            |           | COPYRIGHT © 2010 BY DART AEROSPACE LTD  |    |      |
|            |           | THIS DOCUMENT IS UNCLASSIFIED AND IS AVAILABLE TO THE PUBLIC WITHOUT RESTRICTIONS. IT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES FOR WHICH IT WAS ISSUED AND NOT FOR OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD. |    |      |

\*Specifications Met: ASTM  
B438

Powdered bronze is pressed and then impregnated with SAE 30 oil to make this material self-lubricating. Use it to make bearings and parts for hard-to-reach areas that would be difficult to access for well pumps and turbine blades.

| OD                        | Tolerance<br>Rating | ID     | 3"<br>Lg. | 6 1/2"<br>Lg.   |
|---------------------------|---------------------|--------|-----------|-----------------|
| <b>3/16" Wall Thick.</b>  |                     |        |           |                 |
| 1"                        | Oversized           | 5/8"   | \$931K111 | \$17.27 \$26.57 |
| <b>1/4" Wall Thick.</b>   |                     |        |           |                 |
| 1"                        | Oversized           | 1/2"   | \$931K121 | 18.27 28.11     |
| 1 1/8"                    | Oversized           | 5/8"   | \$931K131 | 22.57 34.73     |
| 1 1/4"                    | Oversized           | 3/4"   | \$931K141 | 24.27 37.34     |
| 1 3/8"                    | Oversized           | 7/8"   | \$931K151 | 28.14 43.29     |
| 1 1/2"                    | Oversized           | 1"     | \$931K161 | 30.66 47.17     |
| 1 3/4"                    | Oversized           | 1 1/4" | \$931K171 | 31.26 48.09     |
| 2"                        | Oversized           | 1 1/2" | \$931K181 | 36.08 55.51     |
| 2 1/4"                    | Oversized           | 1 3/4" | \$931K191 | 41.83 64.35     |
| <b>5/16" Wall Thick.</b>  |                     |        |           |                 |
| 1 1/8"                    | Oversized           | 1/2"   | \$931K201 | 24.02 36.96     |
| 1 1/4"                    | Oversized           | 5/8"   | \$931K211 | 25.08 38.58     |
| 1 1/2"                    | Oversized           | 7/8"   | \$931K221 | 32.23 49.59     |
| 1 5/8"                    | Oversized           | 1"     | \$931K231 | 34.11 52.47     |
| <b>3/8" Wall Thick.</b>   |                     |        |           |                 |
| 1 1/4"                    | Oversized           | 1/2"   | \$931K241 | 25.81 39.70     |
| 1 3/8"                    | Oversized           | 5/8"   | \$931K251 | 33.56 51.63     |
| 1 1/2"                    | Oversized           | 3/4"   | \$931K261 | 32.28 49.66     |
| 1 3/4"                    | Oversized           | 1"     | \$931K271 | 38.42 59.11     |
| 2"                        | Oversized           | 1 1/4" | \$931K281 | 42.00 64.62     |
| 2 1/4"                    | Oversized           | 1 1/2" | \$931K291 | 50.56 77.78     |
| 2 1/2"                    | Oversized           | 1 3/4" | \$931K301 | 53.57 82.42     |
| 2 3/4"                    | Oversized           | 2"     | \$931K311 | 58.79 90.44     |
| 3"                        | Oversized           | 2 1/4" | \$931K321 | 68.12 104.80    |
| 3 3/4"                    | Oversized           | 3"     | \$931K331 | 82.73 127.27    |
| <b>7/16" Wall Thick.</b>  |                     |        |           |                 |
| 1 1/2"                    | Oversized           | 5/8"   | \$931K341 | \$34.35 \$52.84 |
| <b>1/2" Wall Thick.</b>   |                     |        |           |                 |
| 1 1/2"                    | Oversized           | 1/2"   | \$931K351 | 37.06 57.02     |
| 1 3/4"                    | Oversized           | 3/4"   | \$931K361 | 43.90 67.54     |
| 2"                        | Oversized           | 1"     | \$931K371 | 48.93 75.28     |
| 2 1/4"                    | Oversized           | 1 1/4" | \$931K381 | 58.86 90.55     |
| 2 1/2"                    | Oversized           | 1 1/2" | \$931K391 | 61.91 95.25     |
| 2 3/4"                    | Oversized           | 1 3/4" | \$931K401 | 68.61 105.55    |
| 3"                        | Oversized           | 2"     | \$931K411 | 78.49 120.76    |
| 3 1/4"                    | Oversized           | 2 1/4" | \$931K421 | 87.10 134.00    |
| 3 1/2"                    | Oversized           | 2 1/2" | \$931K431 | 92.86 142.86    |
| 4"                        | Oversized           | 3"     | \$931K441 | 102.80 158.15   |
| <b>5/8" Wall Thick.</b>   |                     |        |           |                 |
| 2"                        | Oversized           | 3/4"   | \$931K451 | 53.95 83.00     |
| 2 1/2"                    | Oversized           | 1 1/4" | \$931K461 | 69.39 106.75    |
| 3"                        | Oversized           | 1 3/4" | \$931K471 | 84.51 130.02    |
| 3 3/4"                    | Oversized           | 2 1/2" | \$931K481 | 116.76 179.63   |
| <b>11/16" Wall Thick.</b> |                     |        |           |                 |
| 2"                        | Oversized           | 5/8"   | \$931K491 | 56.20 86.46     |
| <b>3/4" Wall Thick.</b>   |                     |        |           |                 |
| 2"                        | Oversized           | 1/2"   | \$931K501 | \$60.68 \$93.36 |
| 2 1/2"                    | Oversized           | 1"     | \$931K511 | 80.28 123.50    |
| 3"                        | Oversized           | 1 1/2" | \$931K521 | 92.44 142.21    |
| 4"                        | Oversized           | 2 1/2" | \$931K531 | 136.51 210.02   |
| <b>7/8" Wall Thick.</b>   |                     |        |           |                 |
| 3"                        | Oversized           | 1 1/4" | \$931K541 | 97.87 150.57    |
| 3 1/2"                    | Oversized           | 1 3/4" | \$931K551 | 133.25 205.00   |
| <b>1" Wall Thick.</b>     |                     |        |           |                 |
| 3"                        | Oversized           | 1"     | \$931K561 | 104.20 160.31   |
| 4"                        | Oversized           | 2"     | \$931K571 | 156.57 240.87   |
| 4 1/2"                    | Oversized           | 2 1/2" | \$931K581 | 190.41 292.94   |
| 5"                        | Oversized           | 3"     | \$931K591 | 207.77 319.64   |
| 6"                        | Oversized           | 4"     | \$931K601 | 256.87 395.18   |
| 7"                        | Oversized           | 5"     | \$931K611 | 306.15 471.00   |
| <b>1 1/2" Wall Thick.</b> |                     |        |           |                 |
| 6"                        | Oversized           | 3"     | \$931K621 | 327.13 503.27   |

## Oil-Filled 841 Bearing Bronze Rods



- Yield Strength: 11,000 psi
- Hardness: Not Rated
- Temper: Not Rated
- Heat Treatable: No
- Specifications Met: ASTM B438

Powdered bronze is pressed and then impregnated with SAE 30 oil to make this material self-lubricating. Use it to make bearings and parts for hard-to-reach areas that would be difficult to access for lubrication, such as well pumps and turbine blades.

| Dia.   | Tolerance<br>Rating | 2"<br>Lg.      | 3"<br>Lg. | 6 1/2"<br>Lg. |
|--------|---------------------|----------------|-----------|---------------|
| 1/4"   | Oversized           | 8932K31 \$2.69 |           |               |
| 3/8"   | Oversized           | 8932K32        | \$6.00    |               |
| 1/2"   | Oversized           | 8932K41        | 9.17      | \$12.74       |
| 5/8"   | Oversized           | 8932K42        | 12.76     | 17.72         |
| 3/4"   | Oversized           | 8932K43        | 15.49     | 21.51         |
| 7/8"   | Oversized           | 8932K44        | 17.05     | 26.23         |
| 1"     | Oversized           | 8932K45        | 21.12     | 32.50         |
| 1 1/8" | Oversized           | 8932K46        | 22.63     | 34.81         |
| 1 1/4" | Oversized           | 8932K47        | 27.20     | 41.84         |
| 1 3/8" | Oversized           | 8932K48        | 31.85     | 49.00         |
| 1 1/2" | Oversized           | 8932K49        | 35.00     | 53.85         |
| 1 5/8" | Oversized           | 8932K51        | 41.39     | 63.67         |
| 1 3/4" | Oversized           | 8932K52        | 44.88     | 69.04         |
| 2"     | Oversized           | 8932K53        | 54.93     | 84.51         |
| 2 1/4" | Oversized           | 8932K54        | 68.55     | 105.46        |
| 2 1/2" | Oversized           | 8932K55        | 81.49     | 125.37        |
| 3"     | Oversized           | 8932K56        | 115.30    | 177.38        |
| 4"     | Oversized           | 8932K57        | 199.97    | 307.64        |
| 5"     | Oversized           | 8932K58        | 304.24    | 468.06        |
| 6"     | Oversized           | 8932K59        | 427.15    | 657.15        |

3889

Oil-Filled 841 Bearing Bronze Tubes



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-Bronze-C63000-R1.250

PO / BATCH NO.: 039799/5069448

DATE: MAY 08 2018

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 31  
 QUANTITY INSPECTED: 31  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250  
 THICKNESS RECEIVED: 1.250  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

| DESCRIPTION  | NCR<br>(Check<br>Y/N) | COMMENTS                          |
|--|-----------------------|-----------------------------------|
| SURFACE DAMAGE                                     | Y (N)                 |                                   |
| CORRECT FINISH                                     | (Y) N                 |                                   |
| CORROSION  | Y (N)                 |                                   |
| CORRECT GRAIN DIRECTION                            | (Y) N                 |                                   |
| CORRECT MATERIAL PER M-DRAWING                     | (Y) N                 | <u>Astm B150</u>                  |
| CORRECT THICKNESS                                  | (Y) N                 |                                   |
| PHOTO REQUIRED                                     | Y (N)                 |                                   |
| CORRECT REF # TO LINK CERT                         | (Y) N                 | <u>Part #039799-Part #8203K81</u> |
| CORRECT MATERIAL IDENTIFICATION                    | (Y) N                 |                                   |
| CORRECT M# ON THE MATERIAL                         | (Y) N                 |                                   |
| DOES THIS MATERIAL REQUIRE<br>ENGINEERING SIGN OFF | Y (N)                 |                                   |
| DOES THIS REQUIRE AN<br>EXTRUSION REPORT           | Y (N)                 |                                   |

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.  
 RECORD RESULTS BELOW

|                              | HRC | HRB | DUR A | DUR D | WEBSTER |
|------------------------------|-----|-----|-------|-------|---------|
| TYPE OF MATERIAL             |     |     |       |       |         |
| SIZE OF TEST SAMPLE          |     |     |       |       |         |
| HARDNESS / DUROMETER READING |     |     |       |       |         |

testers located in the Quality Office

QC 18 INSPECTION

ENGINEERING SIGNOFF (if required)

INSPECTED BY: DAS  
11  
 DATE: 9-8 MAY 08 2018

SIGNED OFF BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

8 7 6 5 4 3 2 1

| REV. | DESCRIPTION | ECN #  | DATE     | BY | APPROVED |
|------|-------------|--------|----------|----|----------|
| A    | NEW ISSUE   | 17-787 | 17.12.12 | VM | ML       |

## SPECIFICATION CONTROL DRAWING

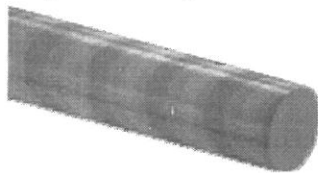
PURCHASE MATERIAL:  
SPECIFICATION:  
PART NUMBER:  
EXAMPLE:

BRONZE C63000  
AMS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463  
MT-BRONZE-C63000-R-[D.DDD]  
WHERE D.DDD IS DIAMETER IN INCHES  
1/4" ROUND BRONZE C63000 = MT-BRONZE-C63000-R-0.250

|  |                    |                          |              |
|--|--------------------|--------------------------|--------------|
| <b>PART</b><br>AEROSPACE   |                    | Newbury, Ontario, Canada |              |
| TITLE<br><b>BRONZE C63000 ROUND BAR</b>  |                    |                          |              |
| PART NO.   | MT-BRONZE-C63000-R | REV                      | A            |
| TOLERANCES<br>UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES<br>DIMENSIONS APPLY AFTER FINISHING  |                    |                          |              |
| DESIGNED BY:   | VM 17/12/12        | TOLERANCES:              | ANGLES ± 10° |
| DRAWN BY:  | VM 12/12/2017      | XX ± .05                 | FINISH       |
| CHECKED BY:  | ML 12/12/2017      | XX ± .05                 | SURFACE      |
| WIG REVIEW BY:   | DP 12/12/2017      | X ± .1                   | ROUGHNESS    |
| APPROVED BY:   | ML 12/12/2017      | SCALE: NTS               | SHEET 1 OF 1 |
| THIS DOCUMENT IS THE PROPERTY OF PART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSE OF THE ORDER ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. |                    |                          |              |

| 4" Lg.            |                  |        |         |         |
|-------------------|------------------|--------|---------|---------|
| OD                | Tolerance Rating | ID     | Each    |         |
| 3/16" Wall Thick. |                  |        |         |         |
| 1"                | Oversized        | 5/8"   | 1260N13 | \$24.32 |
| 1 1/4"            | Oversized        | 3/4"   | 1260N17 | 34.28   |
| 1/4" Wall Thick.  |                  |        |         |         |
| 1"                | Oversized        | 1/2"   | 1260N11 | 29.75   |
| 1 1/8"            | Oversized        | 5/8"   | 1260N15 | 32.00   |
| 1 1/2"            | Oversized        | 1"     | 1260N21 | 41.45   |
| 1 3/4"            | Oversized        | 1 1/4" | 1260N27 | 47.52   |
| 2"                | Oversized        | 1 1/2" | 1260N31 | 51.45   |
| 3/8" Wall Thick.  |                  |        |         |         |
| 1 1/2"            | Oversized        | 3/4"   | 1260N19 | 48.05   |
| 1 3/4"            | Oversized        | 1"     | 1260N23 | 57.00   |
| 2"                | Oversized        | 1 1/4" | 1260N29 | 65.11   |
| 2 3/4"            | Oversized        | 2"     | 1260N33 | 89.04   |
| 1/2" Wall Thick.  |                  |        |         |         |
| 2"                | Oversized        | 1"     | 1260N25 | 74.20   |

## High-Strength 630 Bronze

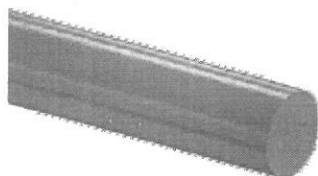


- Yield Strength: 50,000 psi
- Hardness: Rockwell B90 (Medium)
- Temper: HR50
- Heat Treatable: No
- Specifications Met: ASTM B150

The addition of nickel gives 630 bronze high strength. Also called aluminum-nickel-bronze, it's an excellent choice for heavy-load applications, such as hydraulic valve parts and pump shafts.

| Dia.   | Dia. Tolerance Range |         | 1 ft. Lg. | 3 ft. Lg. | 6 ft. Lg. |
|--------|----------------------|---------|-----------|-----------|-----------|
| 3/8"   | -0.004" to 0.004"    | 8203K11 | \$14.29   | \$33.16   | \$57.17   |
| 1/2"   | -0.004" to 0.004"    | 8203K21 | 23.54     | 54.62     | 94.17     |
| 5/8"   | -0.004" to 0.004"    | 8203K31 | 34.33     | 79.65     | 137.33    |
| 3/4"   | -0.004" to 0.004"    | 8203K41 | 47.34     | 109.82    | 189.34    |
| 7/8"   | -0.004" to 0.004"    | 8203K51 | 60.26     | 139.79    | 241.02    |
| 1"     | -0.004" to 0.004"    | 8203K61 | 73.50     | 170.52    | 294.00    |
| 1 1/4" | -0.004" to 0.004"    | 8203K81 | 110.94    | 257.39    | 443.77    |
| 1 3/8" | -0.004" to 0.004"    | 8203K91 | 129.09    | 299.49    | 516.36    |
| 1 1/2" | -0.004" to 0.004"    | 8203K14 | 150.94    | 350.17    | 603.75    |

## Easy-to-Machine High-Strength 642 Bronze



- Yield Strength: 42,000 psi
- Hardness: Rockwell B65 (Soft)



## INSPECTION CERTIFICATE 3.1 TO EN 10204

|                |   |                 |                |
|----------------|---|-----------------|----------------|
| Customer:      | BUSBY METALS LLC<br>850 FREEPORT PARKWAY, SUITE 400<br>COPELL, TX U.S.A 75019<br>U.S.A.                       | Certificate No: | EI168000112.10 |
|                |   | Batch No:       | 160964         |
|                |   | Order:          | PO-20401388    |
| Alloy:         | C63000  | Quantity:       | 1940 lb        |
| Specification: | ASTM B 150 -12 HR50, ASTM B 124 -14a,<br>SAE AMS 4640H, QQ-C-465B AM1<br>ALUMINUM BRONZE ROD, BAR &<br>SHAPES | Description:    | ROUND RODS     |
|                |   | Size:           | 1.25"          |

### Chemical Composition in %

| Element         | Al   | Cu<br>+Ag | Fe  | Ni +<br>Co | Ni  | Mn  | Si   | Sn   | Zn   | Others<br>total |
|-----------------|------|-----------|-----|------------|-----|-----|------|------|------|-----------------|
| Required Min:   | 9.0  | Rest      | 2.0 | 4.0        | 4.0 | -   | -    | -    | -    | -               |
| Required Max:   | 11.0 | Rest      | 4.0 | 5.5        | 5.5 | 1.5 | 0.25 | 0.20 | 0.30 | 0.5             |
| Measured value: | 10.8 | Rest      | 3.3 | 4.6        | 4.6 | 0.9 | 0.06 | 0.03 | 0.22 | <0.5            |

### Mechanical Properties

Round from 1" up to 2" incl.

| Test            | Tensile strength |     | Yield strength<br>at 0.5%<br>Extension Under Load |     | Elongation | Hardness |
|-----------------|------------------|-----|---|-----|------------|----------|
|                 | ksi              | MPa | ksi   | MPa | %          | HB       |
| Units:          | ksi              | MPa | ksi   | MPa | %          | HB       |
| Required Min:   | 110              | 760 | 60  | 415 | 10         | 201      |
| Required Max:   | -                | -   | -   | -   | -          | 248      |
| Measured value: | 112              | 773 | 65  | 452 | 22         | 222      |

- REMARKS**
1. MERCURY FREE STATEMENT: Finkelstein Metals LTD does not knowingly expose material to mercury nor use mercury or mercury products in the production process.
  2. RoHS Compliance
  3. Ammonia Vapor Test passed as per ASTM B858
  4. Melted and Made in Israel

Pini Peker  
Quality control manager

24/05/2016  
Date of inspection

QA  
Signature

Finkelstein Metals LTD – AS9100C Certificate No 78023



21 Haistadion St. P.O.B 10031 • Haifa Bay, 2611001 • Israel • Tel. +972-4-8722547 • Fax +972-4-8720288  
www.finkelstein-metals.com • info@finkelstein-metals.com

BUSBY METALS, LLC | Order#:20320656 | Ship Date:3/13/2018

Customer:MCMaster-CARR SUPPLY COMP | PO#:LH-52904220 | CustPart#:



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-Bronze-C63000-R1.250 PO / BATCH NO. 039799/5069341  
 DATE: MAY 08 2018

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 31  
 QUANTITY INSPECTED: 31  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250  
 THICKNESS RECEIVED: 1.250  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

| DESCRIPTION  | NCR<br>(Check<br>Y/N)                | COMMENTS                           |
|--|--------------------------------------|------------------------------------|
| SURFACE DAMAGE                                     | Y <input checked="" type="radio"/> N |                                    |
| CORRECT FINISH                                     | Y <input checked="" type="radio"/> N |                                    |
| CORROSION  | Y <input checked="" type="radio"/> N |                                    |
| CORRECT GRAIN DIRECTION                            | Y <input checked="" type="radio"/> N |                                    |
| CORRECT MATERIAL PER M-DRAWING                     | Y <input checked="" type="radio"/> N | <u>As per B150</u>                 |
| CORRECT THICKNESS                                  | Y <input checked="" type="radio"/> N |                                    |
| PHOTO REQUIRED                                     | Y <input checked="" type="radio"/> N |                                    |
| CORRECT REF # TO LINK CERT                         | Y <input checked="" type="radio"/> N | <u>PO# 039799 - Part # 8203K81</u> |
| CORRECT MATERIAL IDENTIFICATION                    | Y <input checked="" type="radio"/> N |                                    |
| CORRECT M# ON THE MATERIAL                         | Y <input checked="" type="radio"/> N |                                    |
| DOES THIS MATERIAL REQUIRE<br>ENGINEERING SIGN OFF | Y <input checked="" type="radio"/> N |                                    |
| DOES THIS REQUIRE AN<br>EXTRUSION REPORT           | Y <input checked="" type="radio"/> N |                                    |

| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.<br>RECORD RESULTS BELOW |     |     |       |       |         |
|--|-----|-----|-------|-------|---------|
|  | HRC | HRB | DUR A | DUR D | WEBSTER |
| TYPE OF MATERIAL   |     |     |       |       |         |
| SIZE OF TEST SAMPLE  |     |     |       |       |         |
| HARDNESS / DUROMETER READING   |     |     |       |       |         |

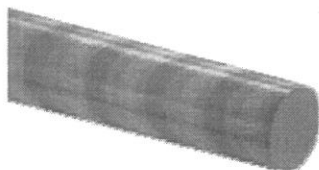
testers located in the Quality Office

| QC 18 INSPECTION   | ENGINEERING SIGNOFF (if required)   |
|--|-------------------------------------|
| INSPECTED BY: <u>DAS 11</u><br>DATE: <u>9-89 MAY 08 2018</u> | SIGNED OFF BY: _____<br>DATE: _____ |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

| 4" Lg.            |                  |        |         |         |
|-------------------|------------------|--------|---------|---------|
| OD                | Tolerance Rating | ID     | Each    |         |
| 3/16" Wall Thick. |                  |        |         |         |
| 1"                | Oversized        | 5/8"   | 1260N13 | \$24.32 |
| 1 1/4"            | Oversized        | 3/4"   | 1260N17 | 34.28   |
| 1/4" Wall Thick.  |                  |        |         |         |
| 1"                | Oversized        | 1/2"   | 1260N11 | 29.75   |
| 1 1/8"            | Oversized        | 5/8"   | 1260N15 | 32.00   |
| 1 1/2"            | Oversized        | 1"     | 1260N21 | 41.45   |
| 1 3/4"            | Oversized        | 1 1/4" | 1260N27 | 47.52   |
| 2"                | Oversized        | 1 1/2" | 1260N31 | 51.45   |
| 3/8" Wall Thick.  |                  |        |         |         |
| 1 1/2"            | Oversized        | 3/4"   | 1260N19 | 48.05   |
| 1 3/4"            | Oversized        | 1"     | 1260N23 | 57.00   |
| 2"                | Oversized        | 1 1/4" | 1260N29 | 65.11   |
| 2 3/4"            | Oversized        | 2"     | 1260N33 | 89.04   |
| 1/2" Wall Thick.  |                  |        |         |         |
| 2"                | Oversized        | 1"     | 1260N25 | 74.20   |

## High-Strength 630 Bronze

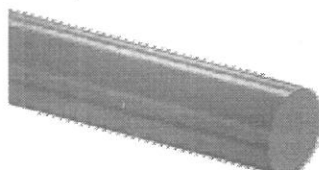


- Yield Strength: 50,000 psi
- Hardness: Rockwell B90 (Medium)
- Temper: HR50
- Heat Treatable: No
- Specifications Met: ASTM-B150

The addition of nickel gives 630 bronze high strength. Also called aluminum-nickel-bronze, it's an excellent choice for heavy-load applications, such as hydraulic valve parts and pump shafts.

| Dia.   | Dia. Tolerance Range |         | 1 ft. Lg. | 3 ft. Lg. | 6 ft. Lg. |
|--------|----------------------|---------|-----------|-----------|-----------|
| 3/8"   | -0.004" to 0.004"    | 8203K11 | \$14.29   | \$33.16   | \$57.17   |
| 1/2"   | -0.004" to 0.004"    | 8203K21 | 23.54     | 54.62     | 94.17     |
| 5/8"   | -0.004" to 0.004"    | 8203K31 | 34.33     | 79.65     | 137.33    |
| 3/4"   | -0.004" to 0.004"    | 8203K41 | 47.34     | 109.82    | 189.34    |
| 7/8"   | -0.004" to 0.004"    | 8203K51 | 60.26     | 139.79    | 241.02    |
| 1"     | -0.004" to 0.004"    | 8203K61 | 73.50     | 170.52    | 294.00    |
| 1 1/4" | -0.004" to 0.004"    | 8203K81 | 110.94    | 257.39    | 443.77    |
| 1 3/8" | -0.004" to 0.004"    | 8203K91 | 129.09    | 299.49    | 516.36    |
| 1 1/2" | -0.004" to 0.004"    | 8203K14 | 150.94    | 350.17    | 603.75    |

## Easy-to-Machine High-Strength 642 Bronze



- Yield Strength: 42,000 psi
- Hardness: Rockwell B65 (Soft)

8 7 6 5 4 3 2 1

| REV. | DESCRIPTION | ECN #  | DATE     | BY | APPROVED: |
|------|-------------|--------|----------|----|-----------|
| A    | NEW ISSUE   | 17-787 | 17.12.12 | VM | ML        |

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

SPECIFICATION:

PART NUMBER:

EXAMPLE:

BRONZE C63000

AMS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463

MT-BRONZE-C63000-R-[D.DDD]

WHERE D.DDD IS DIAMETER IN INCHES

1/4" ROUND BRONZE C63000 = MT-BRONZE-C63000-R-0.250

|  |                          |
|--|--------------------------|
| <b>DART</b><br>AEROSPACE<br>Newbury, Ontario, Canada   |                          |
| TITLE<br><b>BRONZE C63000 ROUND BAR</b>  |                          |
| PART NO.<br><b>MT-BRONZE-C63000-R</b>  | REV<br><b>A</b>          |
| TOOL NO.   |                          |
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES<br>DIMENSIONS APPLY AT TYPICAL FINISHING   |                          |
| DESIGNED BY:<br>VM 17/12/12  | TOLERANCES:<br>X.X ± .01 |
| CHECKED BY:<br>ML 17/12/2017   | ANGLES:<br>X ± .1        |
| APPROVED BY:<br>DP 17/12/2017  | FINISH:<br>X             |
| SCALE: NTS   | REVISIONS: 4 1/8         |
| SHEET 1 OF 1   | SURFACES: 2 1/2          |
| THIS DOCUMENT IS FRANKLY AND COMPLETELY BASED ON THE SUPPLIER'S CONDITION THAT IT IS NOT TO BE<br>USED FOR ANY PURPOSE, INCLUDING REPRODUCTION, WITHOUT WRITTEN PERMISSION<br>FROM DART AEROSPACE LTD. |                          |

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-bronze c63000-R1000

PO / BATCH NO.: 039799/5069340

DATE: MAY 08 2018

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 6'  
 QUANTITY INSPECTED: 6'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.000  
 THICKNESS RECEIVED: 1.000  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

| DESCRIPTION  | NCR<br>(Check<br>Y/N)                | COMMENTS                        |
|--|--------------------------------------|---------------------------------|
| SURFACE DAMAGE                                     | Y <input checked="" type="radio"/> N |                                 |
| CORRECT FINISH                                     | <input checked="" type="radio"/> Y N |                                 |
| CORROSION  | Y <input checked="" type="radio"/> N |                                 |
| CORRECT GRAIN DIRECTION                            | <input checked="" type="radio"/> Y N |                                 |
| CORRECT MATERIAL PER M-DRAWING                     | <input checked="" type="radio"/> Y N | <u>Astm B150</u>                |
| CORRECT THICKNESS                                  | <input checked="" type="radio"/> Y N |                                 |
| PHOTO REQUIRED                                     | Y <input checked="" type="radio"/> N |                                 |
| CORRECT REF # TO LINK CERT                         | <input checked="" type="radio"/> Y N | <u>PO #039799 Part #8203461</u> |
| CORRECT MATERIAL IDENTIFICATION                    | <input checked="" type="radio"/> Y N |                                 |
| CORRECT M# ON THE MATERIAL                         | <input checked="" type="radio"/> Y N |                                 |
| DOES THIS MATERIAL REQUIRE<br>ENGINEERING SIGN OFF | Y <input checked="" type="radio"/> N |                                 |
| DOES THIS REQUIRE AN<br>EXTRUSION REPORT           | Y <input checked="" type="radio"/> N |                                 |

| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.<br>RECORD RESULTS BELOW |     |     |       |       |         |
|--|-----|-----|-------|-------|---------|
|  | HRC | HRB | DUR A | DUR D | WEBSTER |
| TYPE OF MATERIAL   |     |     |       |       |         |
| SIZE OF TEST SAMPLE  |     |     |       |       |         |
| HARDNESS / DUROMETER READING   |     |     |       |       |         |

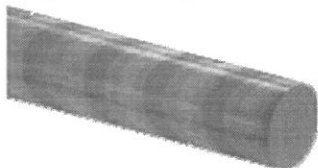
testers located in the Quality Office

| QC 18 INSPECTION   | ENGINEERING SIGNOFF (if required)   |
|--|-------------------------------------|
| INSPECTED BY: <u>DAS 11</u><br>DATE: <u>9-89 MAY 08 2018</u> | SIGNED OFF BY: _____<br>DATE: _____ |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

| 4" Lg.            |                  |        |         |         |
|-------------------|------------------|--------|---------|---------|
| OD                | Tolerance Rating | ID     | Each    |         |
| 3/16" Wall Thick. |                  |        |         |         |
| 1"                | Oversized        | 5/8"   | 1260N13 | \$24.32 |
| 1 1/4"            | Oversized        | 3/4"   | 1260N17 | 34.28   |
| 1/4" Wall Thick.  |                  |        |         |         |
| 1"                | Oversized        | 1/2"   | 1260N11 | 29.75   |
| 1 1/8"            | Oversized        | 5/8"   | 1260N15 | 32.00   |
| 1 1/2"            | Oversized        | 1"     | 1260N21 | 41.45   |
| 1 3/4"            | Oversized        | 1 1/4" | 1260N27 | 47.52   |
| 2"                | Oversized        | 1 1/2" | 1260N31 | 51.45   |
| 3/8" Wall Thick.  |                  |        |         |         |
| 1 1/2"            | Oversized        | 3/4"   | 1260N19 | 48.05   |
| 1 3/4"            | Oversized        | 1"     | 1260N23 | 57.00   |
| 2"                | Oversized        | 1 1/4" | 1260N29 | 65.11   |
| 2 3/4"            | Oversized        | 2"     | 1260N33 | 89.04   |
| 1/2" Wall Thick.  |                  |        |         |         |
| 2"                | Oversized        | 1"     | 1260N25 | 74.20   |

## High-Strength 630 Bronze

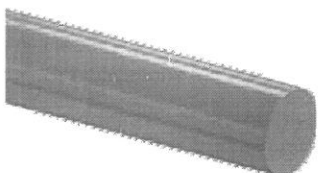


- Yield Strength: 50,000 psi
- Hardness: Rockwell B90 (Medium)
- Temper: HR50
- Heat Treatable: No
- Specifications Met: ASTM B150

The addition of nickel gives 630 bronze high strength. Also called aluminum-nickel-bronze, it's an excellent choice for heavy-load applications, such as hydraulic valve parts and pump shafts.

| Dia.   | Dia. Tolerance Range |         | 1 ft. Lg. | 3 ft. Lg. | 6 ft. Lg. |
|--------|----------------------|---------|-----------|-----------|-----------|
| 3/8"   | -0.004" to 0.004"    | 8203K11 | \$14.29   | \$33.16   | \$57.17   |
| 1/2"   | -0.004" to 0.004"    | 8203K21 | 23.54     | 54.62     | 94.17     |
| 5/8"   | -0.004" to 0.004"    | 8203K31 | 34.33     | 79.65     | 137.33    |
| 3/4"   | -0.004" to 0.004"    | 8203K41 | 47.34     | 109.82    | 189.34    |
| 7/8"   | -0.004" to 0.004"    | 8203K51 | 60.26     | 139.79    | 241.02    |
| 1"     | -0.004" to 0.004"    | 8203K61 | 73.50     | 170.52    | 294.00    |
| 1 1/4" | -0.004" to 0.004"    | 8203K81 | 110.94    | 257.39    | 443.77    |
| 1 3/8" | -0.004" to 0.004"    | 8203K91 | 129.09    | 299.49    | 516.36    |
| 1 1/2" | -0.004" to 0.004"    | 8203K14 | 150.94    | 350.17    | 603.75    |

## Easy-to-Machine High-Strength 642 Bronze



- Yield Strength: 42,000 psi
- Hardness: Rockwell B65 (Soft)

8 7 6 5 4 3 2 1

| REV. | DESCRIPTION | ECN #  | DATE     | BY | APPROVED |
|------|-------------|--------|----------|----|----------|
| A    | NEW ISSUE   | 17-787 | 17.12.12 | VM | ML       |

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

BRONZE C63000

SPECIFICATION:

AMS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463

PART NUMBER:

MT-BRONZE-C63000-R-[D.DDD]

WHERE D.DDD IS DIAMETER IN INCHES

EXAMPLE:

1/4" ROUND BRONZE C63000 = MT-BRONZE-C63000-R-0.250

|   |                          |  |                                      |
|---|--------------------------|--|--------------------------------------|
|  <b>DART</b><br>AEROSPACE  |                          | Headquarters, Ontario, Canada  |                                      |
| <b>TITLE</b><br>BRONZE C63000 ROUND BAR   |                          |  |                                      |
| <b>PART NO.</b><br>MT-BRONZE-C63000-R   | <b>REV.</b><br>A         | UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN INCHES<br>DIMENSIONS APPLY AT 68°F (20°C) |                                      |
| <b>DESIGNED BY:</b><br>VM 17/12/12  | <b>INITIALS AND DATE</b> | <b>TOLERANCES:</b><br>FRACTIONS ± 1/16<br>DECIMALS ± 0.01<br>ANGLES ± 0.5°                 | <b>APPROVED BY:</b><br>ML 12/12/2017 |
| <b>CHECKED BY:</b><br>ML 12/12/2017   | <b>SCALE:</b><br>NAT     | <b>ROUGHNESS</b><br>1.1  | <b>APPROVED BY:</b><br>ML 12/12/2017 |
| <b>DATE:</b><br>12/12/2017  | <b>SHEET 1 OF 1</b>      |  |                                      |
| COPYRIGHT © 2017 BY DART AEROSPACE LTD  |                          |  |                                      |
| THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. ANY REPRODUCTION OR DISSEMINATION OF THIS DOCUMENT IS PROHIBITED WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD. |                          |  |                                      |

8 7 6 5 4 3 2 1